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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,033	12/11/2001	Michael S.C. Chung	F0958	6279

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EXAMINER
NGUYEN, HIEP

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/015,033	CHUNG, MICHAEL S.C.	
	Examiner	Art Unit	
	Hiep Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,7-12 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,7-12,14-16,20 and 21 is/are rejected.
- 7) ☒ Claim(s) 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “ring oscillator” in claims 9 and 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 7-12, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and clarification is required.

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Regarding claim 1, the recitations “said signal comprises a staircase ramp signal” on line 8 and “an output voltage” on line 3 are indefinite because it is not clear as to the “said signal” is the same or different that the “an output voltage” on line 3. Figure 1 of the present application shows that the “a signal” is the output (Vpp) of the circuit and “an output voltage” is also the same voltage (Vpp) which is the output of the charge pump (101). As understood by the examiner, the “a signal” and “an output voltage” are the same signal which is the output voltage (Vpp) of the circuit. These two signals should have the same name such as the output signal. The same rational is true for the “output voltage” on line 6 and the “said signal” in claim 3. The Applicant is requested to explain what is the difference between the “a signal”, the “an output voltage” and the “a staircase ramp signal”. Note that in figure 1 of the present application, the output (VPP) of the circuit is the output of the charge pump (101) and the voltage (VPP) is generated by the charge pump having the oscillation signal (OSC) as input. In other word, signal (VPP) has a voltage level that is the multiple of the oscillation voltage (OSC).

Regarding claim 20, the recitation “generating a programming voltage VPP from a power supply, wherein said programming voltage is greater than a supply voltage VCC from said power supply” is confusing. Figure 1 of the present application shows that voltage (VPP) is generated from the output of the charge pump (101) that receives an oscillating (OCS) from “a ring oscillator” (not shown), no connection between (VPP) and (VCC) is seen; the recitation “activating a program control signal ENVPP to enable programming of a cell of said flash memory” is not clear. Figure 1 shows that the control signal ENVPP is coupled to the charge pump (101) and to the level shifter (105). The only output of this circuit is (VPP). No “enabling signal” connected to the flash memory is seen. The recitation “generating a staircase ramp based on said programming voltage VPP in response to said program control signal ENVPP” is confusing because the **staircase ramp** it self is the “said programming voltage” Vpp. The Applicant is requested to point out in the drawing the “programming voltage VPP”, the “staircase ramp” and to show what signal that “enables programming of a cell of said flash memory”.

Claims 2, 7-12 and 21 are indefinite because of the technical deficiencies of claims 1 and 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Regarding claims 14 and 15, figures 2, 3 and 6 shows a switched capacitor controller for controlling a rise time of an on-chip generated voltage source, comprising:

a charge pump (figure 2);

a ramp generator (Cs) coupled to said charge pump, wherein said ramp generator comprises a switched capacitor (Cs);

a regulator circuit (90, figure 6) coupled to said switched capacitor circuit which causes a capacitor to switch between ground potential and the potential at a node (37), wherein a stair-step ramp signal is generated and said rise time is controlled with said switched capacitor. Note that capacitor (Cs) coupled to output 37 generates the staircase signal. The two capacitors in claim 15 are (Cc) and (Cs).

Regarding claim 16, the staircase can be used on other desired circuit including the Flash EPROM.

The divider network comprises capacitor (Cc) and (Cs). When transmission gate (33) is opened and transmission gates (32) and (34) are closed, capacitors (Cc) and (Cs) form a capacitor divider network.

Allowable Subject Matter

Claims 1-3 and 7-12, 20 and 21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are cited as of interest because it shows some common-mode detection circuit analogous to the claimed invention.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

10-07-04



TUANT.LAM
PRIMARY EXAMINER